

FIG. 1 PRIOR ART

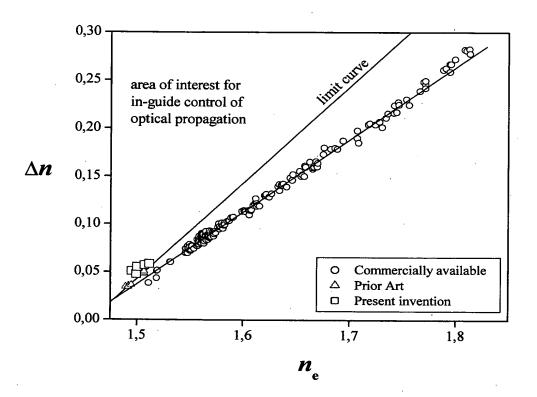
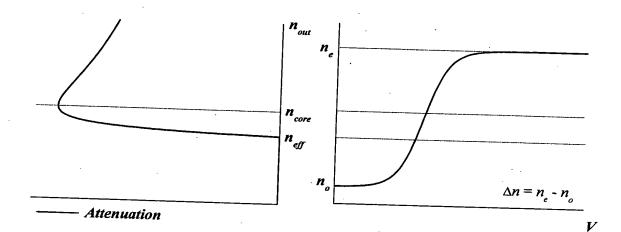


FIG. 2



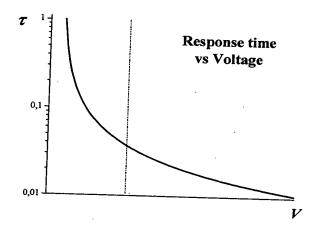


FIG. 3

FIG. 4a

FIG. 4b

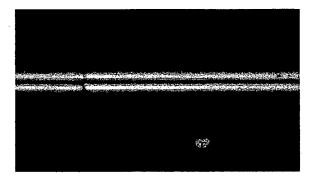


FIG. 5a

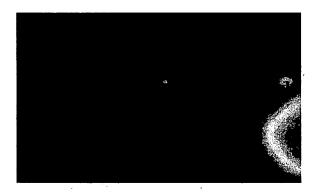


FIG. 5b

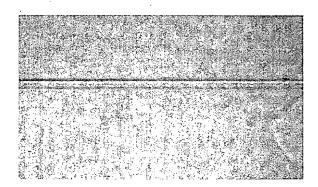


FIG. 5c

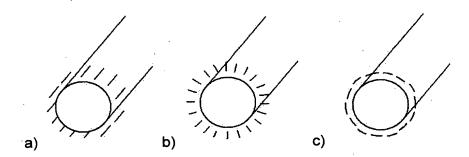


FIG. 6

FIG. 7

Examples of nematic liquid crystal types

Туре	Example
Cyclohexyl carboxylic acid (CHCA)	R_1 —COOH
Bicyclohexyl (CCH)	R_1 R_2
Phenyl cyclohexyl (PCH)	R_1 \longrightarrow R_2
Biphenyl (B)	R_1 \longrightarrow R_2
Biphenyl cyclohexyl (BCH)	R_1 \longrightarrow R_2
Terphenyl (T)	R_1 \longrightarrow R_2
Ester (ME)	$R_1 - COO - R_2$
Phenyl cyclohexyl carboxylate (D)	$R_1 - COO - R_2$
Bicyclohexy ester cyclohexyl (CH)	$R_1 \longrightarrow COO \longrightarrow R_2$

Diester	$R_1 \longrightarrow COO \longrightarrow COO \longrightarrow R_2$
Schiff	$R_1 - CH = N - CH_2$
Cyclohexyl cyclohexanoate	$R_1 - COO - R_2$
Biphenyl ester	$R_1 - COO - R_2$
Biphenyl cyclohexycarboxylate	R_1 —COO—COO— R_2
Thioester	R_1 —COS—COS— R_2
(CCN)	R_1 CN R_2
(BCN)	R_1 \sim

In the above formulae, R_1 and R_2 , independently of one another, represent alkyl, alkoxy, fluoroalkyl, fluoroalkoxy, nitro, cyano or halogen.